The Efficiency of Game-Based Learning Towards Student's Focus And Enjoyment Using Board Game: A Case Study at SK Martin

Jonathan Sidi

Faculty of Computer Science & Information Technology, Universiti Malaysia Sarawak, Kota Samarahan, Malaysia jonathan@unimas.my

Nur Shaheerah Binti Mohamed Nor, Andalina Dayang ak Madang, Suhaira Binti Suhaimi, Ainin Sofea Binti Azhari, Nur Fatin Fareeda Binti Roslan, Siti Khadijah Binti Abdullah, Rapheal Andar

Faculty of Computer Science & Information Technology, Universiti Malaysia Sarawak, Kota Samarahan, Malaysia nshamnor941126@gmail.com, andalinadayang@gmail.com, suhairasuhaimi97@gmail.com, aininazhari6@gmail.com, tinggfareed@gmail.com, ctkhadijah14297@gmail.com, tuanrapheal@gmail.com

Highlights: The purpose of this game research is to observe and evaluate how the implementation of the game-based learning (embedded with IT) can improve students' focus in class and at the same time having fun with their study.

Key words: Game-based learning, board game, primary school.

Introduction

Basically people playing a game when their have free time. What is game based learning? Game-based learning is a structure to complement traditional teaching strategies and infuse teaching with energy, spark innovative thinking and provide diversity in teaching method (Boyle, 2011). Game-based learning concept is healthy activities for the mind of students and supply learners with platform for their creative thoughts to bounce around.

We have been instructed to find primary school, which has been listed, around Kota Samarahan to test our game board. Our group, Pavo Plumeria which consists of seven (7) members decided to go to SK Martin to test our game board. On 10 October 2018, we have been attending a meeting with Encik Tamizi, Penolong Kanan Kokurikulum of the school and discuss on the date when we will conduct the test. Our research subjects are among Year 6 students from SK Martin.

2. Purpose of Research

The purpose of this game research is to observe and evaluate how the implementation of game-based learning can improve students' focus in class and at the same time having fun with their study especially by using game board learning with IT implementation in it. According to Forge (2018), adult students can also learn subjects in this innovative way. Non-traditional learners — students with children, military students, online learners, etc. — can mix academic theory and practical skills with the fun of playing a game.

We had prepared a few questions for the students to answer during the game which involving Science subject. The purpose of the quetions is to help them with memorizing and better understanding the Science facts especially for those students who are from intermediate class. "According to Bruner, students who engage in hands-on learning and play-based activities experience the following benefits increased motivation, buoyed creativity, enhanced problem-solving skills, a greater sense of personal responsibility and the joy of autonomy and independence", said Nott(2016). Some students might find that it is hard to memorize certain facts especially in Science with its own terms. According to Forge (2018), the best games teach important topics but keep students interested at all times.

Moreover, we have implement and use IT knowledge's to come with the idea and preparations of the game which can exposed them to the current IT and explain to them what is IT. Besides, it can enhance their interest to study and know more about IT. From the journal written by Eric Zhi Feng Liu and Po-Kuang Chen(2013), it said that "Most studies on game-based learning have focused on digital game-based learning. Digital games provide animated graphics and audio effects as well as immersive stimulation. Lin and Liu (2009) included game mechanisms in typing practice, inviting learners to beat their rivals. Furthermore, they can have a casual style class with less stress when using game-based learning. This can be proved through review from Gavin Cahill (2017) as he said "Game-based learning takes this same concept and applies it to teaching a curriculum. Students work toward a goal, choosing actions and experiencing the consequences of those actions. They actively learn and practice the right way to do things. The result is active learning instead of passive learning".

Our board game is easy to understand by those student as it has the same concept with snake and leader with a few modifications. Therefore, we believed that game-based learning can help them learn while having fun.

3. Problem Statement

Students are divided into three (3) categories which are from upper class students, intermediate students and upper class students in each schools. Based on observation, students from intermediate class and lower class have less interest in study especially in a formal way. They are much more preferable to practical which is indirect way of study compared to theory. When they are less interested in study due to the formal way of teaching, the probability that they missed out the crucial information on certain subjects and left far behind in study is high. This will lead them to do more practices and exercises to help them digest all the information especially subjects that required